

PATENT CLAIMS

5 1. Procedure to reduce the signalling load in a cellular mobile telephone system which supports packet switched services, at which one in the mobile telephone system included mobile station is switched between a first mode in a first state, here called Ready State, respective a second state, here called Standby State, depending on a time parameter which indicates a time during which the mobile station shall remain in the first state in order to after that change to the second state, c h a r a c t e r i z e d in the step to currently set the value of the time parameter depending on the current speed of the mobile station through the cell network of the mobile telephone system.

20 2. Procedure to set a time parameter in a cellular, i.e. one of a cellular network built up, mobile telephone system which supports packet switched services, at which one in the mobile telephone system included mobile station is switched between a first mode in a first state, here called Ready State, respective a second state, here called Standby State, depending on said time parameter which indicates a time during which the mobile station shall remain in the first state in order to after that change to the second state, c h a r a c t e r i z e d in the step to currently set the value of the time parameter depending on the current speed of the mobile station through the cell network of the mobile telephone system.

3. Procedure according to patent claim 1 or 2,
further characterized in the steps to:

- at the entry of a mobile station into the mobile telephone system allocate the time parameter of the mobile station a predefined value; and to
- at a cell update reduce the time parameter according to a predefined rule.

4. Procedure according to patent claim 3,
characterized in that the value of the time parameter is halved at a cell update.

5. Procedure according to patent claim 1 or 2, further
characterized in the steps to:

- at the entry of a mobile station into the mobile telephone system, allocate the time parameter of the mobile station a predefined value;
- currently estimate the speed of the mobile station through the cell network;
- at cell update report an estimated speed to the network; and to
- adapt the time parameter of the mobile station according to a predefined rule.

6. Procedure according to patent claim 1 or 2,
further characterized in the steps to:

- at the entry of a mobile station into the mobile telephone system, report an estimated speed of the mobile station;

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- set the time parameter of the mobile station according to a predefined rule depending on the speed;
 - currently estimate the speed of the mobile station through the cell network;
 - at cell update report the estimated speed to the network; and to
 - after that adapt the speed of the mobile station according to a predefined rule.

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7. Procedure according to patent claim 5 or 6, characterized in that the time parameter is set according to a table in which different time parameters for different speed intervals are described.

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8. Procedure according to any of the previous patent claims, characterized in that said time parameter of the mobile station and a corresponding time parameter of the cellular network are changed essentially at the same time.

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9. A cellular mobile telephone system (18) which supports packet switched services, at which one in the mobile telephone system included mobile station (24) is switched between a first mode in a first state, here called

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Ready State, respective a second state, here called Standby State, depending on a time parameter which indicates a time during which the mobile station shall remain in the first state in order to after that change to the second state, characterized in means (26) to currently set

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the value of the time parameter depending on the current speed of the mobile station through the cell network of the mobile telephone system.

10. Mobile telephone system according to patent claim 9, further characterized in that there are included:

- means (28) to allocate the time parameter of the mobile station a predefined value at the entry of the mobile station into the mobile telephone system; and
- means (30) to, at a cell update, reduce the value of the time parameter according to a predefined rule.

11. Mobile telephone system according to patent claim 10, characterized in that the value of the time parameter is halved at a cell update.

12. Mobile telephone system according to patent claim 9, further characterized in that there are included:

- means (28) to allocate the time parameter of the mobile station a predefined value at the entry of the mobile station into the mobile telephone system;
- means (32) to currently estimate the speed of the mobile station through the cell network;
- means (34) to report an estimated speed to the network at cell update; and
- means (36) to adapt time parameter to the speed of the mobile station according to a predefined rule.

13. Mobile telephone system according to patent claim 9, further characterized in that there are included:

- means (38) to report an estimated speed of the mobile station at its entry into the mobile telephone system;
- means (40) to set the time parameter of the mobile station according to a predefined rule depending on the speed;
- means (32) to currently estimate the speed of the mobile station through the cell network;

- means (34) to, at cell update, report the estimated speed to the network; and
- means (36) to adapt the time parameter to the speed of the mobile station according to a predefined rule.

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14. Mobile telephone system according to patent claim 12 or 13, characterized in that the time parameter is set according to a table in which different time parameters for different time intervals are described.

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15. Mobile telephone system according to any of the previous patent claims, characterized in that said time parameter of the mobile station and a corresponding time parameter of the cell network are changed essentially at the same time.

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16. A mobile station (24) included in a cellular mobile telephone system which supports packet switched services, at which the mobile station is switched between a first mode in a first state, here called Ready State, respective a second state, here called Standby State, depending on a time parameter which indicates a time during which the mobile station shall remain in the first state in order to after that switch to the second state, characterized in means (26) to currently set the value of the time parameter depending on the current speed of the mobile station through the cell network of the mobile telephone system.

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17. Mobile station according to patent claim 15, further characterized in that there are included:

- means (28) to allocate the time parameter of the mobile station a predefined value at the entry of the mobile station into the mobile telephone system; and

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- means (30) to, at a cell update, reduce the time parameter according to a predefined rule.

18. Mobile station according to patent claim 17,
5 c h a r a c t e r i z e d in that the value of the time
parameter is halved at a cell update.

19. Mobile station according to patent claim 16,
further characterized in that there are
included:

- means (28) to allocate the time parameter of the mobile station a predefined value at the entry of the mobile station into the mobile telephone system;

- means (32) to currently estimate the speed of the mobile
15 station through the cell network;

- means (34) to report an estimated speed to the network at cell update; and

- means (36) to adapt time parameter to the speed of the mobile station according to a predefined rule.

20. Mobile station according to patent claim 16,
further c h a r a c t e r i z e d in that there are
included:

- means (38) to report an estimated speed of the mobile station at its entry into the mobile telephone system;

- means (40) to set the time parameter of the mobile station according to a predefined rule, depending on the speed;

- means (32) to currently estimate the speed of the
30 mobile station through the cell network;

- means (34) to, at cell update, report the estimated speed to the network; and

- means (36) to adapt the time parameter to the speed of the mobile station according to a predefined rule.

21. Mobile station according to patent claim 19 or 20, characterized in that the time parameter is set according to a table in which different time parameters for different speed intervals are described.

22. Mobile station according to any of the previous patent claims, at which said time parameter of the mobile station and a corresponding time parameter of the cell network are changed essentially at the same time.